

Work Order ID 105464

August-06-13 11:05:05 AM

105464

Item ID: D3953-11 Revision ID: Item Name: Gas Spring Spacer			,	Accept	*	1900	0 40	Setup	Start Stop	171	S1*		
Start Date: Required Date Reference;	8/06/13	Start Qty: 30.00 Req'd Qty: 30.00	*30* *30*			Cust Item I Customer:	D:				o.o.p	^N;	S2*
Approvals:	Process Pla	in: _ ML5	Date: 13-08-05	Tooling: SPC (Y/N):	-		 nte:	- 			Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center I Draw Nbr		Operation Description ision Nbr		Set Up/ Run Hours		Tool ID	Tool #	Plan Code	Accept Qty	t Rejec Qty		Reject Number	Insp. Stamp
D3953 100 *100* Hardinge Hardinge CNC Lath	C	Memo		0.00	P	13.8	·/S		2,9	- <u>φ</u>	<u></u>	·	<u> </u>
*110 * QC Quality Control		QC2- Inspect parts off ma	chine FAI/FAIB	0.00	P	13-8	. /5_	-	34	, 	<u>}</u>	. <u>-</u>	

DQA:	Date:	

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

iven.	23 / 140									QA Closed:	Dat	te:
Work Orde	r:				DISPOSITION				AGAINST DE	PARTMENT,		
Part N	o				Rework Scrap Use-as-is	Machining Small Fa					Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR N	o				Work Order Update	Large Fab Composite Supplier						
Root				Descr	iption of work order update	In	itial	Acti	on	Sign &	<u>-</u>	
Cause	Date	Step	Qty		or Non-conformance	Chie	ef Eng	Descri	iption	Date	Verification	n QC Inspector
Doc/Data												
quip/Tooling						1						
Operator							1					
Material												
Setup							ļ					
Other												
Process												
Supplier							ļ					
Training												
Jnapproved												
						FAULT	CATE	GORY				
Landin	g Gear			_	General					1	i	
L	Bending			L	Bend	_	Grain			Ovalized		Pressure/Forced
	Centre No	ot Conce	ntric to (D/S	BOM/Route	-	Hardwa		ļ	Over/Under	•	Temperature/Cure
	Cracks			<u> </u>	Broken/Damaged	_	-	ion Incomplete	}	Part incorred		Weld
	Crushed/	Crimped			Burrs	-		tions Incomplete/U	Inclear	Part Lost/Mi	ssing	Wrong Stock Pulled
I.	Cuffs			L	Contamination	—		enance	<u> </u>	Part Moved		
	Heat Trea			L	Countersink	\vdash	Mislabe		<u> </u>	Positioned V	· · ·	
ļ	Inspectio		Tube	L	Cut Too Short	-	Misread	i		Power Loss/	Surge	Other
ļ	Ripples in			L	Drill Holes	-	Offset					_ .
Į	Torque V			ո _	Drawing	_		Calibration			. , .	
. [Turning S	equence			Finish	\square	Out of S	Sequence				
1	Wave/Tw	vist in Tul	oe oc		Folio	- 1 - 10	Jutside	Dimensions				

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Quality Control

August-06-13 11:05:05 AM Item ID: D3953-11 Accept *N900040100* Setup Start Revision ID: Item Name: Gas Spring Spacer Stop Start Date: 8/06/13 **Start Qty: 30.00** *30* **Cust Item ID:** Required Date: 8/20/13 Req'd Qty: 30.00 *30* Customer: Reference: Run Start Approvals: **Process Plan:** Date: Tooling: Date: ___ Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool # Tool ID Plan Accept Reject Reject Insp. Work Center ID Description Run Hours Code Qty Oty Number Stamp 120 QC8- Inspect parts - second check 0.00 DAS DA 13/08/16 *120* 0.00 Memo Quality Control Identify as per dwg & Stock Location: 57076 0.00 130 *120* 34x M.W. 13-09-16 Packaging 0.00 Memo Packaging 140 QC21- Final Inspection - Work Order Release 0.00 *140* 0.00 Memo

MLJ 13-08-16

											DQA.	Date.	
NCR:	Yes	/ No				WORK ORDER NON-	100	NFORM	MANCE / UPDATE		QA Closed:	 Date:	
Work Orde	25:				• /•=•	DISPOSITION AGAINST DEPARTMENT/PROCESS							
Part NCR I	۷o.					Rework Scrap Use-as-is Work Order Update	Therm	Machining Sma	stube	Fab Prod. Eng. Coor. Quali hing Rec/Store/Packaging Oth			
Root					Descri	ption of work order update	1	Initial	Action		Sign &		
Cause		Date	Step	Qty	<u> </u>	or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator							İ						
Material							1						
Setup					ŀ			•					
Other			i		ļ				-				ļ
Process													į
Supplier		}											
Training													
Unapproved	<u> </u>				<u> </u>								
					<u> </u>	<u>_</u>	AUL	T CATE	GORY			<u> </u>	
Landi	ng (1			_	General	_	1			7		1
	<u> </u>	Bending				Bend		Grain		\vdash	Ovalized	_	Pressure/Forced
	L	Centre N	ot Conce	ntric to	O/S	BOM/Route	<u> </u>	Hardwa		L	Over/Under		Temperature/Cure
		Cracks				Broken/Damaged					Weld		
		Crushed/Crimped Burrs				Instructions Incomplete/Unclear Part I				Part Lost/Mi	ssing	Wrong Stock Pulled	
	Cuffs Contamination									Part Moved			
	Heat Treat Countersink					Mislabe	led	[Positioned V	Vrong			

Misread

Out of Calibration

Outside Dimensions

Out of Sequence

Offset

Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

seklisi Prinr

August-06-13 11.05.08 AM

Work Order ID: 105464

Parent Item:

D3953-11

Parent Item Name: Gas Spring Spacer

105464 *D3953-11*

Start Date: 8/06/13

Required Date: 8/20/13

Start Qty: 30.00

Required Qty: 30.00

Comments:

IPP RevA: New issue DD verified by:EC revC DD 10.03.02 verified by:EC

IPP Rev:B as per dwg

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	 Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	 Status
MDELRINR0.750		Purchased	No			100	f	45.0530	0.06	1.894737	-		
MDFI RIN	IR0 750)							**	1.074757			

Delrin Round Bar 0.75"

Location	Loc Oty	Loc Code		
MAT018	45.053			
116183	4.8			
117273	4.665			
117322	0.94			
121783	27.49			
124957	7.158			
126596	•		2./25	2013.8.15

										UQA:	Date			
NCR: Y	es / N	o			WORK ORDER NON-C	CON	FORN	MANCE / UPI	DATE	QA Closed:	Date			
					DISPOSITION	T			AGAINST DE			<u> </u>		
Work Orde				<u>-</u>	Rework]	Skid-tube Crosstube]	Water Jet	Engineering		
Part N	lo				Scrap Use-as-is	」 ▮			Small Fab Finishing	4	d. Eng. Coor. re/Packaging	Quality Other		
NCR N	lo	.			Work Order Update]		Large Fab	Composite					
Root				Descri	ption of work order update	In	nitial	Act	tion	Sign &	"			
Cause	Dat	e Step	Qty		or Non-conformance	Chi	ef Eng	Descr	ription	Date	Verification	QC Inspector		
Doc/Data														
Equip/Tooling	_	1								:		j		
Operator			1	7										
Material ·	· .					ł								
Setup						ł								
Other														
Process														
Supplier														
Training							:							
Unapproved				<u> </u>		1					<u> </u>			
		_				AULT	CATE	GORY		<u> </u>	<u> </u>			
Landi	ng Gear			_	General					٦		٠		
	Bendi	_			Bend	\vdash	Grain		<u> </u>	Ovalized	-	Pressure/Forced		
	⊢	Not Conce	entric to	o/s _	BOM/Route	—	Hardwa		<u> </u>	Over/Under		Temperature/Cure		
	Crack			<u> </u>	Broken/Damaged	_		on Incomplete		Part Incorre	 	Weld		
	Crushed/Crimped Burrs				┥	-		ions Incomplete/	Unclear	Part Lost/M	issing	Wrong Stock Pulled		
	Cuffs		Contamination			\vdash	Mainte		<u> </u>	Part Moved				
	Heat			$oxedsymbol{oxed}$	Countersink	\vdash	Mislabeled			Positioned V	_	٦		
	Inspection Strip in Tube Cut Too Short									Other				
	Ripple	s in Bend			Drill Holes		Offset							

Out of Calibration

Out of Sequence

Outside Dimensions

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Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

DART AEROSPACE LTD	Work Order:	105464
Description: Gas Spring Spacer	Part Number:	D3953-11
Inspection Dwg: D3953 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

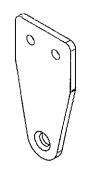
X First Article Prototype

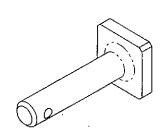
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.44	+/-0.030	- 44			\$0.02	
Ø0.63	+/-0.030	.63.	7			-
0.65	+/-0.030	-648			·······	
0.13	+/-0.030	- 126				
Ø0.257	+0.006/-0.001	,260				
R0.03	+/-0.030	٠. ٥		/		
0.03 x 45°	+/-0.030 x 0.5°	50				

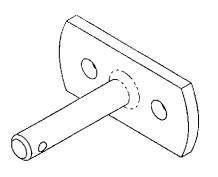
Measured by: Rap	Audited by:	BODA ON	Prototype Approval:	N/A
Date: 13 . 2 . 15	Date:	13 08 16 9-8	Date:	N/A

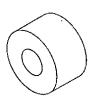
Rev	Date	Change	Revised by	Approved
A	09.10.22	New issue	KJ , A	1
В	09.12.14	Dwg Rev updated	KJ ST	

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D3953-1 GAS SPRING BRACKET

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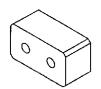
D3953-3 GAS SPRING STUD, LID

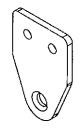
D3953-5 GAS SPRING STUD, BASE

D3953-7 GAS SPRING SPACER

D3953-9 GAS SPRING WASHER











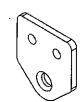
D3953-11 GAS SPRING SPACER

D3953-13 GAS SPRING SPACER (FULL LID)

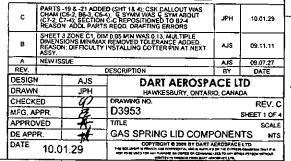
D3953-15 GAS SPRING BRACKET

D3953-17 GAS SPRING SPACER (SPLIT LID)

D3953-19 GAS SPRING BRACKET (SQUARE BASKET)



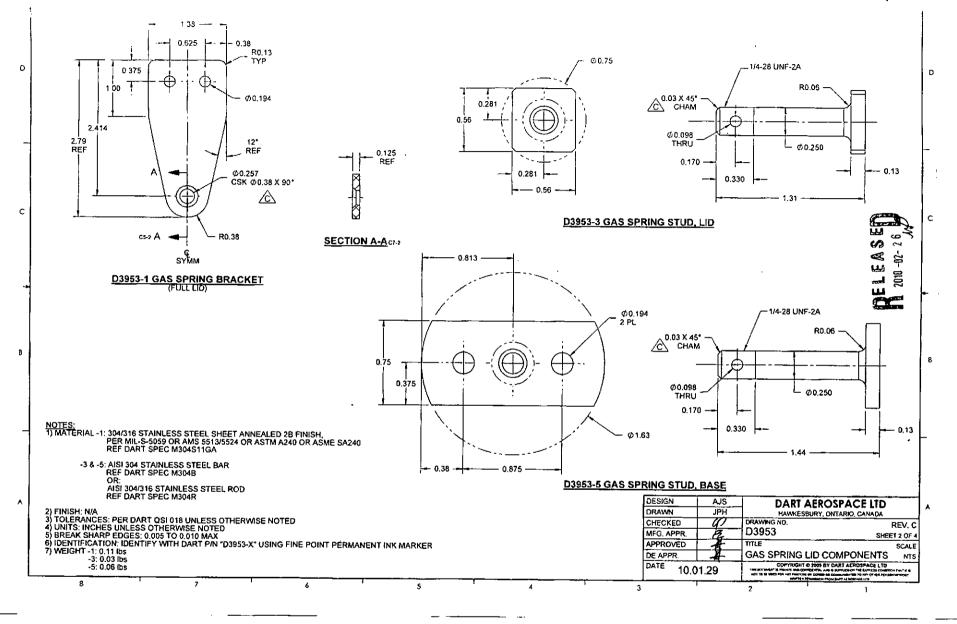




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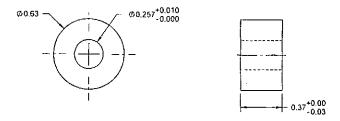
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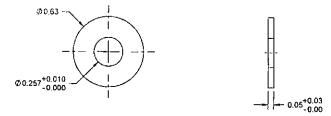


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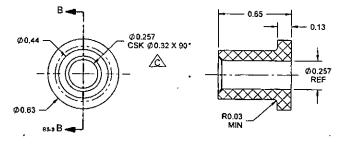
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D3953-7 GAS SPRING SPACER

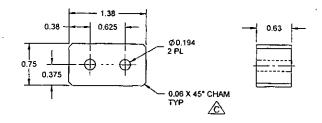


D3953-9 GAS SPRING WASHER



D3953-11 GAS SPRING SPACER

SECTION B-B 87-3



D3953-13 GAS SPRING SPACER

DESIGN	AJS	DART AEROSPACE LTD					
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA					
CHECKED	0	DRAWING NO.	REV. C				
MFG, APPR,	8.	D3953 _{SHEE}	T 3 OF 4				
APPROVED	1	TITLE	SCALE				
DE APPR.		GAS SPRING LID COMPONENTS NIS					
DATE 10.0	1.29	COPYRIGHY © 2809 BY DART AEROSPACE LTD THE SOCHER'S IN THAT'S AND CHARGE AT A WELL SHAPE TO THE SOCHER'S CONSTRUCT THAT IT IS ACT TO BE MADE FOR ANY THAT CHARGE SECONDOC CONSUMENTS TO MAY IT THE POSSOR HANDLE.					

NOTES: 1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK REF DART SPEC M-DELRIN-R

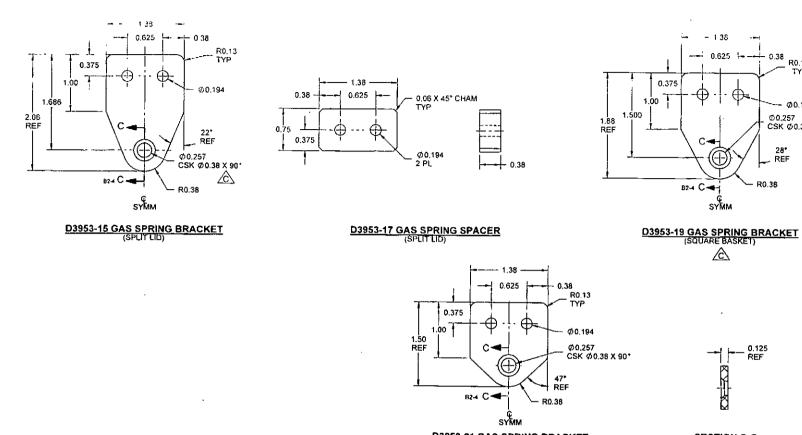
-13: AISI 304 STAINLESS STEEL BAR REF DART SPEC M304B

2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -7/-9-11: < 0.01 ibs EACH
-13: 0.17 ibs

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NOTES: 1) MATERIAL -15/-19/-21: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC M304S11GA

-17: AISI 304 STAINLESS STEEL BAR REF DART SPEC M3048

2) FINISH: N/A REF DART SPEC M304B
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0,005 TO 0,010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT - 15: 0,08 lbs

C

-17: 0.10 lbs

-19: 0.07 lbs -21: 0.06 lbs

SECTION C-C D3953-21 GAS SPRING BRACKET (SQUARE BASKET)

DATE 10.0	1.29	COPYRIGHT © 2009 BY DART AEROSPACE LYD THE SERVICE OF SPACE OF SERVICE OF THE SE					
DE APPR.		GAS SPRING LID COMPONENTS NTS					
APPROVED	4	TITLE SCALE					
MFG. APPR.	_B_	D3953 SHEET 4 OF 4					
CHECKED (7)		DRAWING NO. REV. C					
DRAWN JPH		HAWKESBURY, ONTARIO, CANADA					
DESIGN	AJS	DART AEROSPACE LTD					

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R0.13

- Ø0.194

CSK Ø0.38 X 90*

Ø0.257

28°

REF

R0.38

0.125

REF

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